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| Project Overview page 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name of Project:** | | | It’s a plants life | | | | | | | | | | | | | | | | **Duration:** | | | 4 weeks | | | | | | |
| **Subject/Course:** | | | **Biology** | | | | | | | **Teacher(s): Stugart, Quinones, Solomon** | | | | | | | | | **Grade Level:** | | | Mostly 10th | | | | | | |
| **Other Subject Areas to Be Included:** | | | English, Spanish I, Biology, Automotive Electrical, Life Skills | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Project Idea**  Summary of the issue, challenge, investigation, scenario, or problem: | | | Portfolio of ways that energy flows:   * Lab write-up on energy flow * Spanish project on flow of food * English research story—Autobiography of a Plant * Build a lighting system with descriptive writing describing electrical energy flow | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Essential Question** | | | How does energy flow? Through an ecosystem/Through an organism/Across nations | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Content Standards** to be taught and assessed**:** | | | Science  SPI 3210.3.3  SPI 3210 Inq.2  SPI 3210 Inq.5  Spanish  1 and 2  Auto  Competencies 1-10  English  3002.4.1  3002.4.2  3002.4.3  3002.4.4  3002.4.6  3002.2.2  3002.3.11  3002.3.12  3002.6.5  3002.3.16  3002.3.6  3002.1.5  3002.6.2  3002.6.3 | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | **T** | **A** | **E** |  | | | | | | | | | **T** | | **A** | | | **E** |
| **Professional (21st Century) Skills** to be taught, assessed and/or encouraged**:** | | | Collaboration | | | | | | | |  |  |  | Other: | | | | | | | | |  | |  | | |  |
| Communication (Oral Presentation) | | | | | | | |  |  | X |  | | | | | | | | |  | |  | | |  |
| Critical Thinking/Problem Solving | | | | | | | |  |  | X |  | | | | | | | | |  | |  | | |  |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Major Products & Performances** | Group: | | |  | | | | | | | | | | | | | | | | **Presentation Audience**   **Presentation Audience:**      Class   School | | | | | | | | |
| X | Class | | | | | | | |
|  | School | | | | | | | |
| X | Community | | | | | | | |
| Individual: | | | Portfolio of energy flow including Spanish flashcards, lab report, research paper on Autobiography of a Plant (to be published to community), build a lighting system to show to experts | | | | | | | | | | | | | | | | X | Experts | | | | | | | |
| X | Web | | | | | | | |
|  | Other: | | | | | | | |
| Project Overview page 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Entry Event** to  launch inquiry,  engage students: | | Field trip to Shelby Bottoms—Solomon contact Denise, and Mangrum; Life skills: Cumberland Science Adventure Field Trip | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessments** | | **Formative Assessments**  (During Project) | | | | X | | Quizzes/Tests | | | | | | | | X | | Practice Presentations | | | | | |  | | |
|  | | Journal/Learning Log | | | | | | | | X | | Notes | | | | | |  | | |
| X | | Preliminary Plans/Outlines/Prototypes | | | | | | | | X | | Checklists | | | | | |  | | |
| X | | Rough Drafts | | | | | | | |  | | Concept Maps | | | | | |  | | |
|  | | Online Tests/Exams | | | | | | | |  | | Other: | | | | | |  | | |
| **Summative Assessments**  (End of Project) | | | |  | | Written Product(s), with rubric: Lab report, autobiography of a plant | | | | | | | |  | | Other Product(s) or Performance(s), with  rubric: Lighting system | | | | | |  | | |
| X | | Oral Presentation, with rubric | | | | | | | | X | | Peer Evaluation | | | | | |  | | |
| X | | Multiple Choice/Short Answer Test | | | | | | | |  | | Self-Evaluation | | | | | |  | | |
|  | | Essay Test | | | | | | | |  | | Other: | | | | | |  | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Resources Needed** | | **On-site people, facilities:** | | | | | | |  | | | | | | | | | | | | | | | | | | | |
| **Equipment:** | | | | | | | Soldering irons (automotive) | | | | | | | | | | | | | | | | | | | |
| **Materials:** | | | | | | | wire, solder, small light bulbs, batteries, test lights (automotive) | | | | | | | | | | | | | | | | | | | |
| **Community resources:** | | | | | | |  | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Reflection Methods** | | **(Individual, Group, and/or Whole Class)** | | | X | | Journal/Learning Log | | | | | | | |  | | Focus Group | | | | | |  | | |  | | |
|  | | Whole-Class Discussion | | | | | | | |  | | Fishbowl Discussion | | | | | |  | | |  | | |
|  | | Survey | | | | | | | |  | | Other: | | | | | |  | | |  | | |